

Translation

PATENT COOPERATION TREATY

PCT/JP2004/004704



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference A31312M	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2004/004704	International filing date (day/month/year) 31 March 2004 (31.03.2004)	Priority date (day/month/year) 31 March 2003 (31.03.2003)
International Patent Classification (IPC) or national classification and IPC G06F 19/00		
Applicant INSTITUTE OF MEDICINAL MOLECULAR DESIGN. INC.		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 31 March 2004 (31.03.2004)	Date of completion of this report 24 January 2005 (24.01.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/004704

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP04/004704

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-13, 15-23, 25-27	YES
	Claims	1, 14-24	NO
Inventive step (IS)	Claims		YES
	Claims	1-27	NO
Industrial applicability (IA)	Claims	1-27	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: The Development of Workbench System to Support the Construction of Genetic Control Network, (Hiroshi Fukagawa, et al.), The Tissue Culture Engineering, 25 February, 2001 (25.02.01), Vol. 27, No. 2, pages 68-71

Document 2: WO, 2002-023395, A1 (Institute of Medicinal Molecular Design, Inc.), 21 March, 2002 (21.03.02), full text, Figs. 1-13 (Family: none)

Document 3: System to Support the Construction of a Genetic Control Network by means of Graphical Representation, (Yukari Shibagaki, et al.), Proceedings of the 14th Annual Conference of the Japanese Society for Artificial Intelligence, 3 July, 2000 (03.07.00), pages 543 and 544

The subject matters of claims 1, 14 and 24 do not appear to be novel or to involve an inventive step in view of document 1 cited in the ISR.

Document 1 describes a workbench system to support the construction of a genetic control network that constructs a genetic network, referring to the information stored in a database, when the user inputs the name of a gene or a protein of interest, and shows the network graphically.

The subject matters of claims 2, 6 and 7 do not appear to involve an inventive step in view of document 1 cited in the ISR.

Document 1 (Fig. 2 and its explanation) describes that an auxiliary information display window, a node and edge information listing display window, etc., in addition to a network display window are provided as screen images, and that the information source can be accessed by clicking a point or a line on the screen.

A person skilled in the art could have easily conceived of the constitution wherein a network window and an information window can be operated in an interlocked manner, based on the above-mentioned descriptions in document 1.

The subject matters of claims 3-5, 9-12 and 21-23 do not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR.

Document 2 describes that a method for generating a molecular function network produces network bioevents and medicinal molecules, as well as biomolecules, and that pathways are treated as subnets.

As described in document 2, a person skilled in the art could have normally had a molecular function network including bioevents, medicinal/physiological active molecules and pathways for analysis, etc.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: V

The subject matter of claim 13 does not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR.

Document 2 describes the searching by keywords. Highlighting hit items on the screen is a well-known technology.

The subject matters of claims 15-19 and 25-27 do not appear to involve an inventive step in view of documents 1 and 3 cited in the ISR.

Document 3 describes that, in the screen of a genetic control network, the shapes and colors of nodes and edges can be specified according to attribute values such as factor information and relationship information.

As described in document 3, a person skilled in the art could have easily conceived of the constitution of representing a molecular function network wherein items and lines are represented differently according to the conditions as required.

The subject matter of claim 20 does not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR.

Document 2 describes that a set of biomolecules is treated as a single biomolecule or a data hierarchy that represents the state of grouping of molecules is provided.